The Importance Understanding of Artisan's Perspective in Pattern Analysis

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Abstract
Understanding perspective from the artisans is the unique approach in this study since most of the studies in pattern analysis and classification ignore the individuals or artisans who design and create the patterns. Most of the research about pattern analysis has been conducted by surveying the patterns or collecting the data from the reliable sources without trying to engage with the artisans and understand their culture and worldview. The pattern analysis that does not take into consideration the artisan's perspectives will be misguided, since it proceeds from the researcher's limited interpretation of the patterns, without any regard for the context in which the patterns were created and appreciated.
Keywords: pattern analysis, creators' perspective, design, symmetry

Pattern Analysis

Research has been done in the field of patterns classification. Starting with a very general ornaments classification, based on cultural geographic by Owen Jones in 1856, pattern classifications were then continued by H.J. Woods (1934-1935) who introduced a Mathematics concept of symmetry group for the first time to people who were not familiar with mathematics, and a way to systematically diagram and determine patterns. The theory of symmetry group was broadly used not only by the art historians, designers, and architects, but also in the fields of archeology and anthropology when D.K. Wasburn and Crown (1988) introduced pattern symmetry with a more systematic approach that resulted in an easier method of diagramming that helped determine the symmetry class under the symmetry group.

The use of symmetry group is a tool to analyze and categorize the pattern into certain classes under a symmetry group. Symmetry group has seven classes for one-dimensional group and seventeen classes of two-dimensional group. This analytical tool has been used in the study of patterns in cultural artifacts, and some researchers demonstrate the use of this analytical tool as being able to uncover the cultural information between the cultural group. The process of uncovering the cultural information is done by comparing the classes that are assigned to the patterns in cultural artifacts. The most intriguing discovery from that research is that every ethnic or cultural group has their own preference in using the symmetry. Washburn and Crowe (1988) have explained that "cultural groups (interacting people who share a common life system) have preferential ways of arranging design elements" (p.24). So, a cultural group will consistently use only several specific symmetries in their design system, rather than randomly using all seven one-dimensional classes, and all seventeen two-dimensional classes. The consistent use of only several specific symmetry groups for the pattern design in the cultural artifacts shows that symmetry analysis is essentially significant.

Shapiro, in his comparison of African and British patterns, finds that African patterns seem to prefer a rotation objects to a position 45 degrees past the perpendicular to the horizontal plane, unlike British patterns (Shapiro, 1960, pp.17-30). Bentley tested whether different symmetry classes affected the ease of pattern reproduction and found that both Scottish and Bukusu subjects used the property of symmetry to help them recall and reproduce patterns, though the African subjects made more errors reproducing the rotated patterns than patterns with vertical reflection (Bentley, 1977, pp.415-424).

Analysis of ethnographic and archeological data demonstrate non-random tendencies. For example, Crowe, in several studies of African art (1971, 1975, 1982) shows that pattern designs can be described systematically by their symmetries, that repeated designs occur frequently on many types of media, and that a number of different motions characterize the designs. Crowe finds that, although all seven one-dimensional and twelve of seventeen two-dimensional patterns appear on Kuba raffia cloth, carved wooden cups, portrait statues of kings, wall mats for houses, and elaborately decorated masks, (1971) all of the seven band symmetries and twelve of the seventeen two-dimensional symmetries (1975) have been used by Benin artists, and that in each group, certain symmetries predominated. The more similarities there are in classes among ethnic and cultural groups, the more likely the patterns have common connection. Englebrecht, for example, proposes that stylistic homogeneity is correlated with intensity of interaction with other cultures; that is, widely dispersed homogenous styles indicate intense interaction while different style juxtaposed indicate little or no interaction (Englebrecht, 1974, pp.52-65).

In relation to the use of symmetry group, lately, several researchers argued that the symmetry group is too superficial and does not explained specific criteria to be used as analytical tools for determining symmetry classes. Horne and Hann suggested a new term ‘induced group’, because they found there is another class can be induced in one class of symmetry (Horne and Hann, 1996, pp.18-26). While Grunbaum mentions that the symmetry group developed by Washburn failed to lead to significant application, in part due to the fact that Washburn attempted a widely applicable and quite detailed classification without making sufficiently explicit criteria used. Therefore, he developed a theory of symmetry in a much more restricted setting. Grunbaum finds the tools appropriate for ornaments in fabric plane in Peruvian textiles (Grunbaum, 2004, pp.18-48). However, the pattern that Grunbaum developed is suitable only for Peruvian textiles, and not compatible enough to be applied to other textiles with different techniques. Peruvian textiles mainly have egalitarian and asymmetrical motifs, while double-ikat textiles mainly has highly complex symmetrical motifs.

Within a given cultural setting, the same scene may be “seen” differently by different individuals depending upon their particular knowledge and needs. Likewise, persons from different culture may ‘see’ a given scene differently depending upon their prior knowledge, experience, and immediate context. Thus, a person from a given culture may see that pattern has symmetry but may not see the difference between one particular kind of symmetry.

Conclusion

There are many factors that contribute to why ethnic groups have their own perception in using symmetry, one factor is that it is related with the theory of perception, by Foster (1984:84), who mentions that there are four features in shape recognition: local feature, local spatial feature, global feature and global spatial feature. In general, there are two major features which are local and global; global features associated with patterns consist of symmetry and the orientation of the design unit in the patterns. Although cultural ethnic groups do not use the same terms of symmetry, the fundamental definition of symmetry is used in the process of pattern creation, especially when the artisans compose or arrange or generate a pattern, and since every ethnic group has their own rules in composing the pattern. The rules that every cultural group has will consist of the specific rules and general rule; specific rules will relate with the local features, such as what is the initial point, line, or shape; how the spatial relation between point, line, and shape; and those local features will relate with the cultural meaning, while the global features will relate with the shape composition, and how the artisans assign the symmetry motion (translation, reflection, glide reflection, rotation) into their pattern creation. Those terms will probably have different terminologies in every culture. Since most of the artisans will create the patterns based on the memory, this knowledge remains tacit in the artisans' mind and passes from the generation to generation without being well documented. To understand this knowledge, the researcher needs to involve with the activity as participant observation and doing in depth interview with the artisans, in order to understand the tacit cultural knowledge. Based on Stadley (2016), cultural knowledge is of fundamental importance because people in particular areas use it consistently to generate behavior and interpret their experience. Cultural knowledge exists at two levels of consciousness: 'explicit' culture makes up part of what we know, a level of knowledge people can communicate about with relative ease, with another level of knowledge that is, according to Stadley (2016), "[a]t the same time, a large portion of our cultural knowledge remains 'tacit'" (p.11).

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